IN THE TITLE:

Please substitute the following amended title:

CHEMICAL LIQUID SUPPLY APPARATUS AND DEARATING METHOD ~~THEREOF~~ THEREFOR

IN THE SPECIFICATION:

Please replace the subtitle and paragraph [0001] with the following amended subtitle and paragraph:

TECHNICAL ~~FILED~~ FIELD OF THE INVENTION

[0001] The present invention relates to a chemical liquid supply apparatus for discharging a predetermined amount of liquids such as chemical liquids and, for example, to a chemical liquid supply apparatus and a deaerating method ~~thereof~~ therefor, which are suitably used for coating a photoresist liquid on a surface of a semiconductor wafer.

Please replace the subtitle and paragraph [0006] with the following amended subtitle and paragraph:

~~DISCLOSURE~~SUMMARY OF THE INVENTION

[0006] However, in such a conventional chemical liquid supply apparatus, it has become clear to be unable to remove completely the bubbles collected in a filtration film of the filter due to matter such as flow resistance of the filtration film, and osmotic pressure of the chemical liquid. As far as the bubbles cannot be exhausted completely from the inside of the filtration film of the filter, it is difficult to dispense stably the chemical liquid and improve the ~~dispense~~dispensing accuracy. Accordingly, the improved manufacture yield of products is not expected.

Please replace paragraph [0007] with the following amended paragraph:

[0007] An object of the present invention is to stabilize the amount of chemical liquid dispensed from the chemical liquid supply apparatus and to improve remarkably the ~~dispense~~dispensing accuracy.

Please replace the subtitle prior to paragraph [0025] with the following amended subtitle:

~~BEST MODE FOR CARRYING OUT THE INVENTION~~DESCRIPTION OF PREFERRED EMBODIMENTS

[0025] Hereinafter, embodiments of the present invention will be detailed based on the drawings.

Please replace paragraph [0043] with the following amended paragraph:

[0043] FIG. 3 is an explanatory view of a deaerating method of the chemical liquid supply apparatus according to the present invention. First, the pump discharge-side valve V2, the discharge valve V4, and the return valve V5 are closed, whereby the pump outlet flow path 42 and the liquid discharge flow path 48 each become closed. The deaeration valve V3 is opened, whereby the liquid introduction flow path 45 becomes closed. Under this condition, the vacuum source 8 is operated. By doing so, the bubbles collected inside the filtration film of the filter 41 can be removed completely. Therefore, it is possible to dispense stably the chemical liquid and improve remarkably the ~~dispense~~dispensing accuracy, and consequently to manufacture semiconductor integrated circuits with high quality and good yield.

Please replace paragraph [0052] with the following amended paragraph:

[0052] FIG. 6 is a liquid circuit diagram showing schematically a chemical liquid supply apparatus according to ~~sill~~still another embodiment of the present invention. The case of the embodiment shown in FIG. 6 is the same as the embodiment shown in FIG. 5 in that the vacuum source 8 is provided to a downstream side, that is, a secondary side of the filter 41, and is the same as the embodiment shown in FIG. 4 in that the buffer tank 57 is provided to a primary side of the vacuum source 8. Accordingly, the embodiment shown in FIG. 6 also has the same operations and effects as those of the chemical liquid supply apparatus shown in FIG. 1.

Please replace paragraph [0053] with the following amended paragraph:

[0053] FIG. 7 is a liquid circuit diagram showing schematically a chemical liquid supply apparatus according to ~~sill~~still another embodiment of the present invention. The embodiment shown in FIG. 7 is characterized in that the vacuum source 8 is provided to an upstream side, that is, a primary side of the filter 41. An exhaust flow path 59 is such that one end thereof is connected to a portion between the filter inlet 41a and the pump discharge-side valve V2 of the pump outlet flow path 42 and the other end is connected to the vacuum source 8. That is, the vacuum source 8 and the filter 41 communicate with each other through the exhaust flow path 59.

Please replace paragraph [0056] with the following amended paragraph:

[0056] FIG. 8 is a liquid circuit diagram showing schematically a chemical liquid supply apparatus according to ~~sill~~still another embodiment of the present invention. The case of the embodiment shown in FIG. 8 is the same as the embodiment shown in FIG. 7 in that the vacuum source 8 is provided to an upstream side, that is, a primary side of the filter 41, and is the same as each of the embodiments shown in FIGs. 4 and 6 in that the buffer tank 57 is provided to the primary side of vacuum source 8. Therefore, the embodiment shown in FIG. 8 also has the same operations and effects as those of the chemical liquid supply apparatus shown in FIG. 1.

Please replace paragraph [0057] with the following amended paragraph:

[0057] FIG. 9 is a liquid circuit diagram showing schematically a chemical liquid supply apparatus according to ~~sill~~still another embodiment of the present invention. The case of the embodiment shown in FIG. 9 is characterized in that a system control section 9 controls, without using the vacuum source, the sucking and exhausting operations of the pump 11 and each timing of opening/closing the pump outlet flow path 42, the liquid discharge flow path 48, and the exhaust flow path 51, whereby the bubbles in the filter 41 can be removed.

Please replace paragraph [0069] with the following amended paragraph:

[0069] According to the present invention, it is possible to stabilize the amount of the chemical liquid dispensed from the chemical liquid supply apparatus and to improve remarkably the ~~dispense~~ dispensing accuracy.